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10/612,847	07/03/2003	Byung Joon Lee	002013.P092	6902

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EXAMINER
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HIGA, BRENDAN Y

ART UNIT	PAPER NUMBER
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2453

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/612,847	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> BRENDAN Y. HIGA	<b>Art Unit</b> 2453	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-15 and 17-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-6,9-14 and 17-29 is/are rejected.
- 7) ☐ Claim(s) 7 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This Office action is in response to Applicant's amendment and request for reconsideration filed on December 22, 2008.

Claims 1-7, 9-15 and 17-29 are pending.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-6, 9-14, and 17-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Courtney (US 7065562)(“Courtney”) in view of Harvey et al. (US 7054924)(“Harvey”), in view of Murray et al. (US 7113989)(“Murray”) and Chorafakis et al. (US 7,401,086)(“Chorafakis”).**

As per claim 1, Courtney teaches a network management system comprising: an extensible markup language (XML) template in which the form of a command line interface (CLI) command supported by a network device is expressed in XML (see col. 2, lines 45-56 and col. 6, lines 19-29); and a network management interface which converts the XML template into a tree-shaped internal data structure (see “configuration

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schema comprising a command hierarchy”, col. 2, lines 45-56 and col. 6, lines 19-29), and by providing a predetermined argument to the converted XML template, converts the XML template into a set of CLI commands that are to be transmitted to the network device (Fig. 6, ref. 120) (“pushed out to the router”, see col. 2, lines 45-56 and col. 6, lines 19-29).

Courtney does not expressly teach, wherein the XML template includes, for each CLI command, a first tag which is to indicate that a CLI tag appears in the XML document and the CLI tag includes subordinate CLI tags or character string data, a second tag which is to specify attributes of the CLI tag, and

A CLI tag in which all CLI tag attributes are omitted is a pure aggregation tag (PAT) in which subordinate CLI tags included in the PAT are capable of being materialized more than once.

However, in the same art of network device configuring Harvey, teaches a system for automatically configuring a network device according to a set of CLI commands (“containing one or more CLI commands” see col. 8, lines 30-47), which are represented in a XML template document (“Document Type Definition” or DTD, see col. 8, lines 30-47 and also Tables 1-12, col. 16-col.20).

Furthermore, Harvey teaches, wherein the XML template includes, for each CLI command, a first tag (“XML tags”, see Table 14, col. 22) which is to include the possibility that a CLI tag appears in the XML document (see col. 8, lines 38-47) and the CLI tag includes subordinate CLI tags or character string data (see “CLI strings” col. 20, lines 40-44) a second tag (“XML tags”, see Table 14, col. 22) which is to specify the

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attributes of the CLI tag (Harvey, see col. 8, lines 38-47 and "parameters", col. 20, lines 40-44).

Also Harvey teaches, a CLI tag in which all CLI tag attributes are omitted is a pure aggregation tag (PAT) (see col. 20, lines 57-60, which disclose a template having a CLI string with zero parameters, read as a pure aggregation tag).

One of ordinary skill in the art would have been motivated to combine the teachings of Courtney and Harvey. The motivation for doing so would have been to implement a configuration template for certain network devices directly, and without the use of parameters or attributes (see Harvey, col. 20, lines 57-60).

Harvey, however, does not necessarily teach the use of subordinate CLI tags enclosed in the PAT which are materialized more than once.

Nevertheless, including subordinate CLI tags (read as CLI commands) within a configuration file was well known in the art. For example, Murray, teaches CLI scripts having a plurality of iterative CLI commands (i.e. commands that can be materialized more than once) for performing network configuration (see col. 3, line 54-col. 4, line 37). Also see Chorafakis which further demonstrates the use of iterative CLI commands in CLI scripts (see abstract and col. 5, lines 28-38, read as commands that can be materialized more than once).

A person having ordinary skill in the art would have been motivated to modify the teachings of Courtney and Harvey, with the teachings of Murray – that is to modify Harvey's configuration template, having a CLI string with zero parameters (see col. 20, lines 57-60), with further subordinate CLI tags (read as CLI commands) which can be

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materialized more than once. The motivation for doing so would have been to handle complicated configuration tasks that require more than a single CLI command to accomplish the task.

As per claim 2 Courtney further teaches wherein the network management interface comprises: an XML parser (see Converter, Fig. 6, ref. 245) which converts the XML template into the tree-shaped internal data structure (see col. 2, lines 45-56 and col. 6, lines 18-28); a materializer (see Converter, Fig. 6, ref. 245, wherein the converter is read as having both a parser element for parsing the XML commands and a materializer for then generating the corresponding CLI commands) which provides a predetermined argument to the converted XML template and converts the XML template into the set of CLI commands (see col. 2, lines 45-56 and col. 6, lines 18-28); a connection manager which transmits the converted CLI commands to the network device (Fig. 6, ref. 120) (see col. 2, lines 45-56);

However, Courtney does not expressly teach a result processor, which determines whether the transmitted CLI commands are successfully executed and collects additional information.

However, in the same art of network device configuring Harvey, teaches a system for automatically configuring and transmitting configuration commands to a network device using device-specific XML configuration templates, which may comprise a set of one or more CLI commands (see abstract, col. 2, lines 66-col. 3, lines 20, and col. 6, lines 21-32). Furthermore, Harvey teaches in response to transmitting the

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configuration commands to the network device the network device may then generate one or more events upon a successful configuration which is monitored by a network management workstation (see col. 5, lines 20-35 and col. 7, lines 58-65).

One of skill in the art would have been motivated to modify the teachings of Courtney with the teachings of Harvey, for including a result processor, in order to provide a network administrator with feedback as to the status of configuration commands at the network device.

As per claim 3, Courtney further teaches wherein the network management interface is an X-CLI interface (see "XML-CLI configuration interface", col. 5, lines 53-57).

As per claim 4, Courtney further teach wherein the network management interface and the network device are connected through a protocol which provides a virtual terminal function to the network device (see Fig.8, col. 5, lines 47-65, wherein the administrator is able to remotely access and send commands to the network device, router 120, read as a "virtual terminal function").

As per claim 5, Courtney does not expressly teach wherein the XML template is described by using document type declaration (DTD), which is used to show the list of tags forming an XML document and to list the attributes of respective tags.

However, in the same art as noted above, Harvey teaches a system for configuring a remote network device using a XML template conforming to an Extensible Markup

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Language Document Type Definition (XML DTD), comprising one or more XML tags that delimit the configuration information (see col. 2, lines 60-65).

One of skill in the art would have been motivated to modify the teachings of Courtney with the teachings of Harvey, for including a XML DTD file, in order to define the grammar with which the XML configuration information must conform (see Harvey, col. 8, lines 51-53).

As per claim 6, Courtney in view of Harvey further teaches wherein the XML template (see Courtney, "XML configuration command schema", col. 2, lines 33-55 and Harvey, "XML template", col. 8, lines 30-47), comprises: a third tag (Harvey, "XML tags", see Table 14) which indicates that the attributes specified by the second tag have character string data (Harvey, see col. 8, lines 38-47 and "attribute name", col. 20, lines 40-44); and a fourth tag (Harvey, "XML tags", see Table 14) which indicates the possibility that the attributes specified by the second tag are omitted (Harvey, see Table 14, col. 22).

Claims 9, 11, 12, and 29 are rejected under the same rationale as claims 1, 3, and 4 since they recite substantially identical subject matter. Any differences between the claims do not result in patentably distinct claims and all of the limitations are taught by the above cited art.

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Claims 10, 13, and 14 are rejected under the same rationale as claims 2, 5, and 6 since they recite substantially identical subject matter. Any differences between the claims do not result in patentably distinct claims and all of the limitations are taught by the above cited art.

As per claim 17, Courtney in view of Harvey further teaches setting a variable value indicating a failure of the execution of the CLI command to false (Harvey, “if successful (i.e. value indicating a failure is false), the device applies a incremental configuration col. 10, lines 46-54) and setting variable i to the address value of a first materialized CLI command (i.e a incremental configuration instruction), while the variable I indicates an effective command (Harvey, “if successful”, see col. 10, lines 46-54), waiting till a predetermined prompt character string which is specified as a third attribute value is transmitted from the network device (Harvey, “generate an event on success of the configuration”, see col. 10, lines 46-54); if the prompt character string is transmitted (Harvey, after the initial configuration step, see col. 10, lines 46-54), transmitting the CLI command to the network device (Harvey, see “push mode”, col. 10, lines 27-35); and if the network device requires an additional input, transmitting a predetermined character string (Courtney in view of Harvey, does not indicate that the network device requires any additional input thus a predetermined character string is not sent).

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As per claim 18, Courtney in view of Harvey further teaches when an error occurs as the result of the execution of the CLI command, setting the variable value indicating a failure of the execution of the CLI command to 'true' (see Harvey, col. 7, lines 58-col. 8, line 5) and by considering the state of variable value indicating a failure of the execution of the CLI command and the branch location for a failure of the execution of the CLI command, storing in the variable I the next address value of a CLI command to be executed (see "resolution of the program either manually or programmatically", see col. 7, lines 58-col. 8, line 5)

Claims 19-28 are rejected under the same rationale as claims 17 and 18 since they recite substantially identical subject matter. Any differences between the claims do not result in patentably distinct claims and all of the limitations are taught by the above cited art.

#### ***Allowable Subject Matter***

Claims 7 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-6, 9-14, and 17-29 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENDAN Y. HIGA whose telephone number is (571)272-5823. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brendan Y Higa/  
Examiner, Art Unit 2453

**/ARIO ETIENNE/  
Supervisory Patent Examiner, Art Unit 2457**